



Don Wilson
Vice President and
General Manager

Certified Mail # 7011 1150 0001 2589 4672

July 24, 2017

United States, et.al. v. Valero, et.al.
Civil Action No. SA-05-CA-0569
May 30-31, 2017 Flaring Event
Final Report

Director
Air Enforcement Division (2242A)
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

To Whom It May Concern:

Paragraph 242 of the Consent Decree between the United States and Valero requires the submission of a report within 60 days following the end of a flaring incident. The attached report fulfills this obligation for a May 30-31, 2017 hydrocarbon flaring incident that occurred at the Valero Benicia Refinery.

Please contact Olivia Day at (707) 745-7361 if you have any questions regarding this report.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Donald C. Wilson'.

Donald C. Wilson
Vice President & General Manager

DCW/OID/tac

Enclosure

cc: Director, Air Division (AIR-1), Jordan.Deborah@EPA.gov
Attn: Chief, Air Enforcement Office
U. S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, CA 94105
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Root Cause Failure Analysis

Impact Incident Number: **182373**

The information contained below satisfies the requirements of the Valero Consent Decree XII.D.242

Refinery: Benicia
Incident Type: Hydrocarbon Flaring
Combustion Source: North and South Flare

Due Date: 7/30/2017
Final

Previous Dates and Reports: _____

(1.) The date and time that the Incident started and ended:

Times:	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Start/End Date:	<u>5/30/2017</u>	<u>5/31/2017</u>					
From:	<u>8:00 PM</u>	<u>12:00 AM</u>					
To:	<u>11:59 PM</u>	<u>2:21 PM</u>					
Total (Hrs):	<u>4.0</u>	<u>14.4</u>					

After submittal of the Compliance Plan for Flaring Devices specified in 237, was the Incident attributable to the combustion of a stream(s) of Continuous or Intermittent Routinely-Generated Fuel Gases covered in the plan?

NA (Yes/No/NA)

If yes, it is not necessary to complete Sections 2-9.

If the flared gas contains less than 162 ppm H₂S, it is not necessary to complete Sections 2-9.

(2.) Estimate of the quantity of SO₂ that was emitted:

Average Flowrate, dscfh (FR)	(FR)	<u>72,013</u>	Std. Temp: 68 deg.
Total Duration, hours	(TD)	<u>18.4</u>	
Avg. Vol. Frac. Total Sulfur, scf/scf	(ConcTS)	<u>0.005748</u>	
Tons of SO ₂ =		<u>0.6</u>	
Tons of SO ₂ = [FR][TD][ConcTS][8.31 x 10 ⁻⁵]			
Tons of SO ₂ = [72013][18.4][0.005748][8.31 x 10 ⁻⁵]			

Include explanation of basis for any estimates of missing data points (257):

The average flow rate and concentration of total sulfur are based on flare flow meter values and total sulfur CEMS.

(3.) The steps taken to limit the duration and/or quantity of SO₂ emissions associated with the Incident:

A. The startup operations followed standard written procedures. These procedures are intended to minimize flaring and ensure the safety of personnel and equipment. There was no upset or malfunction involved.

B. Operations verified that no unnecessary sources were venting to the flare system prior to beginning the flaring for the unit startup.

C. The refinery operated at reduced throughput rates during this period and maximized recovery and consumption of low pressure fuel gas to further reduce flaring.

Did the incident result from temporarily bypassing a flare gas recovery system for safety or maintenance reasons?

No (Yes/No)

If yes, it is not necessary to complete sections 3 or 5-9.

Root Cause Failure Analysis

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(4.) Detailed analysis that set forth the Root Cause of the Incident, to the extent determinable:

The flaring event was caused by the refinery-wide startup after a sudden loss of power supply from Pacific Gas & Electric (PG&E) caused the entire refinery to shut down on May 5, 2017. Although most units were not running at full capacity, the main activity occurring at the time of flaring was the startup of the Fluid Catalytic Cracking Unit (FCCU). The startup followed established procedures. These procedures are designed to minimize flaring consistent with regulations and Valero's FMP, while ensuring the safety of the community, refinery, personnel, and equipment.

Was the incident attributable to the SU/SD of a unit in which a similar Incident was previously analyzed for corrective action?

No (Yes/No)

If yes, it is not necessary to complete Sections 5-9 if the corrective action is identified.

Has a commitment been made in the Compliance Plan for Flaring Devices to process this stream in a planned flare gas recovery system that would have reduced the SO2 emissions for this incident to less than 500 lbs in a 24 hour period?

No (Yes/No)

If yes, it is not necessary to complete Sections 5-9.

(5.) Analysis of the measures, if any, that are reasonably available to reduce the likelihood of a recurrence of the Incident including cost and effectiveness of changes in design, operation, and maintenance.

All feasible prevention measures were planned and procedures incorporated for the unit startup. These prevention measures and procedures help minimize flaring but are not able to completely prevent flaring, as described in Section (3) above.

(6.) Description of corrective action(s) or explanation of why corrective action(s) are not required:

Is corrective action required? No (Yes/No)

The startup followed standard written procedures, which are intended to minimize flaring and ensure the safety of personnel and equipment.

If corrective action(s) are not complete, what is the proposed schedule?

Start Date: _____

Completion Date: _____

(7.) Stipulated Penalty Analysis: **NOT APPLICABLE**

(8.) The investigation of causes and/or possible corrective actions still are underway 60 days after the end of the incident so an extension is being requested (up to 60 days typically). Input a date only for initial and follow-up reports.

No (Yes/No)

The followup report shall be submitted by: _____

Alternatively, HC Flaring RCFA reports may be submitted as part of Semi-annual Progress Reports (243).

(9.) Is(are) the completion of the implementation of corrective action(s) finalized at this time?

NA (Yes/No/NA)

If no, a corrective action completion report is required within 30 days of completion.

Certification (261)

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and that I have made a diligent inquiry of those individuals immediately responsible for obtaining the information and that to the best of my knowledge and belief, the information submitted herewith is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Signed: _____

Name: Donald C. Wilson

Date: 7/24/17

Title: Vice President and General Manager

Submit copies to EPA, the applicable EPA regional office (242), and the applicable state agency (376).

NOTE: Prior to the NSPS compliance date for flaring devices, a single RCFA report may be prepared for HC Flaring Incidents with root causes that routinely reoccur provided EPA and the appropriate Plaintiff-Intervener have been given prior notification. (244)